DEDICATED MICROS

ice

Day/Night Cameras

DM/ICE-DN3U/M DM/ICE-DN3U/L

PAL & NTSC versions

Pb

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Whilst every attempt is made to ensure these manuals are accurate and current, Dedicated Micros reserve the right to alter or modify the specification of the machine described herein without prejudice.

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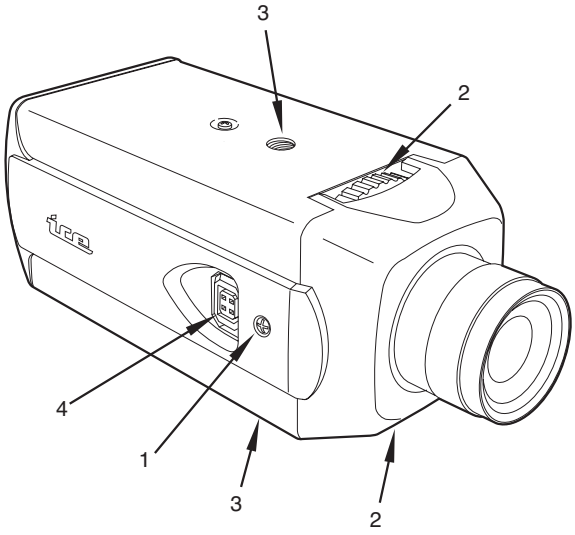
Introduction

These instructions cover DM/ICE-DN3U/.. Series cameras. Read all of these instructions. Use them to install your camera and have them available for its lifetime. If you have any problems, contact your agent. Note that not all cameras have all of the features described in this manual. All cameras are fitted with a Direct Drive/Auto Iris lens connector, have adjustable back focus and can accept C and CS lenses.

Models

DM/ICE-DN3U/M Day/Night	540 TVL	1/3"	SuperHAD™ CCD	0.7/0.1 lux at F1.2	98-260VAC 50/60Hz
DM/ICE-DN3U/L Day/Night	540 TVL	1/3"	SuperHAD™ CCD	0.7/0.1 lux at F1.2	11-40 VDC/12-30 VAC



1. Back focus mechanism locking screw (both sides)
2. Back focus adjustment (Top & bottom)
3. Mounting bush (Top & bottom)
4. AI lens connector (DC & video)

Important Safeguards

Product Safety

WARNING

- Installation and servicing is only to be carried out by suitably qualified and experienced personnel.
- Mains cameras contain hazardous voltages.
- Do not remove covers as there is a risk of injury or death by electric shock.
- Only power low voltage cameras from a class 2 isolated power supply.

This camera range is designed for use in general purpose CCTV applications and has no other purpose.

Only operate your camera between the temperatures of -10°C and +50°C. Do not operate your camera outside its specified power supply range. Cameras must only be used in clean, dry, dust-free environments unless housed in a suitable protective housing to IP65 or better.

Electromagnetic Compatability (EMC)

CAUTION

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This product is intended solely for use in general CCTV applications.

The product must be installed and maintained in accordance with good installation practice to enable the product to function as intended and to prevent problems. Refer to your agent for installation guidance.

Declaration of Conformity

The manufacturer declares that the equipment supplied with this manual is compliant with the essential protection requirements of the EMC directive 89/336 and the Low Voltage Directive LVD 73/23 EEC.

Conforming to the requirements of standards EN55022 for emissions, EN61000-4 parts 2, 3, 4, 5, 6 and 11 for immunity and EN60950 for Electrical Equipment safety.

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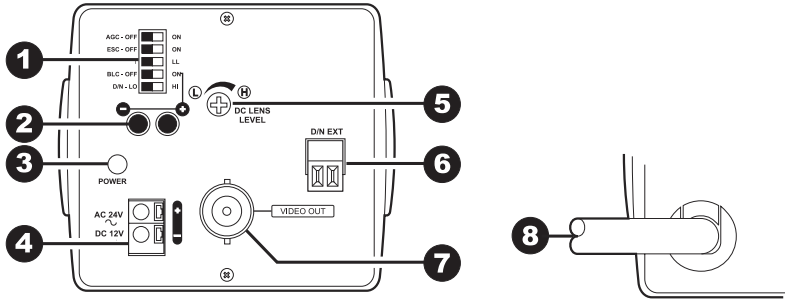
Camera Care

In order to avoid damaging your camera, note the following points:

CAUTION

- The camera has threaded mounting points on the top and bottom of the case. Only use a standard, photographic mounting bolt with a 1/4-20 UNC thread.
- Before fitting the lens, make sure that its back will not touch the CCD sensor or associated components when screwed fully home.
- Do not touch the image surface of the sensor. If the sensor is accidentally touched, only clean it using isopropanol.
- Do not expose the camera sensor to very bright light over a long period of time as this may cause damage to the CCD sensor. The camera and lens set-up must be correct to avoid possible damage due to long term exposure to bright light. A lens with an automatic iris is recommended under these conditions.

Controls and Switches



1. DIP switches - refer to DIP Switches
2. Line lock phase adjust advance/retard buttons - refer to Functions, Line Lock Phase Adjust
3. Power indicator LED
4. Low voltage connector (11-40V DC, 12-30V AC 50/60Hz) - refer to Power Connections
5. DC lens level potentiometer - refer to Functions, Lens Level
6. Day/night mode external trigger - refer to Functions Day/night trigger
7. Composite video output BNC - refer to Video Connections
8. Power cable (mains supply models) 98-260V AC 50/60Hz - refer to Power Connections

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Connections

Power Connections

ICE series cameras are available in AC mains voltage and AC/DC low voltage types. The voltage required to operate the camera is clearly marked on the rear panel of the camera. The power LED on the rear panel indicates that power is connected.

Mains Power Supply
Cameras that are intended to operate directly from the mains supply are fitted with a nondetachable power supply cord. The voltage of operation is 98-260 VAC at 50/60Hz.

Warning: *Refer to the wiring instruction label attached to the supply cord and connect it to a 98-260 VAC outlet. Ensure that a secure means of isolation from the supply is provided for the camera in accordance with the national wiring regulations of the country of installation.*

Warning: *This camera is a Class 2 device and therefore does not have an earth connection in the power cord.*

Auto-Switching Low Voltage Power Supply
Cameras fitted with an automatic selecting power supply operate between 11-40 VDC and 12-30 VAC.

Connections and polarity are indicated below the screw terminals on the rear panel. The power supply must be a class 2 isolated type.

Video Connections

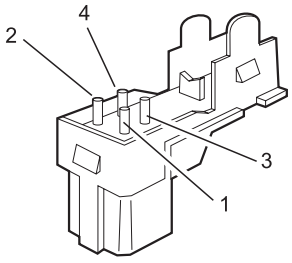
To obtain a video output, connect a video coaxial cable terminated with a 75Ω BNC connector to the BNC socket marked VIDEO OUT on the rear of the camera.

Lens Connections

Fixed and Manual iris lenses (for indoor use only) require no wiring connections.

Auto Iris Lens
Connect the auto iris lens to the four-pin connector located on the side of the camera. If the lens does not have a DD plug fitted then wire the lens to a suitable plug. Pin connections for the iris drive plug are shown below.

PIN	DIRECT DRIVE AUTO IRIS LENS	VIDEO DRIVE AUTO IRIS LENS
1	Control coil positive (+)	Not used
2	Control coil negative (-)	Lens positive supply
3	Drive coil negative (-)	Ground
4	Drive coil positive (+)	Video drive signal



Lenses

Lens Setup Procedures

Manual Iris Lenses
For manual or fixed iris lenses set the AES/ESC switch and AGC switch to ON.

Video Drive Auto-Iris Lenses
Switch the AES/ESC and AGC functions off. Refer to the lens instructions and adjust the lens for the optimum picture (video output level of 1V peak-to-peak). Switch the AGC on.

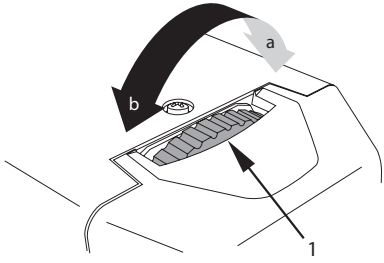
Direct Drive (DC) Auto-Iris Lenses
Switch the AES/ESC and AGC functions off. Use an appropriate screwdriver to turn the DC lens level potentiometer (on the rear of the camera) fully clockwise. Next, slowly adjust the potentiometer anticlockwise until the optimum picture is obtained (video output level of 1V peak-to-peak). Switch the AGC on.

Back Focus Adjustment
The back focus adjustment is located at the front of the camera and is accessible from either the top or bottom of the case.

To adjust the back focus:

1. Loosen the two back focus mechanism locking screws (top and bottom of the camera).
2. Turn the back focus ring anticlockwise until the CCD sensor assembly is as far away from the back of the lens as possible.
3. Turn the back focus ring clockwise until focus is achieved.
4. When the back focus adjustment is satisfactory, tighten the locking screws. Do not over-turn or force the back focus adjustment ring.

Note: *Always turn the back focus ring such that during focusing, the CCD sensor assembly is brought towards the back of the lens (i.e. clockwise). If the point of best-focus is passed, repeat the back focus procedure from step 2.*



1. Back focus adjustment ring
a. Clockwise
b. Anticlockwise

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Dip Switches

Note: *White indicates default switch position*

AGC (Automatic Gain Control)
The Automatic Gain Control (AGC) feature can improve picture quality when levels of illumination are low. Select ON or OFF using the AGC switch. For most applications the AGC feature should be ON and is therefore the default setting.

ESC (Electronic Shutter Control)
The ESC (Electronic Shutter Control) feature compensates for excessive light level by automatically adjusting shutter speed. The ESC setting must not be used when an AI or DD lens is fitted. The default setting for ESC is OFF.

SYNC (Synchronisation)
Camera synchronisation feature is selected using the SYNC dip switch. Choose INT (internal) or LL (Line lock).

LL locks the frame rate to the power supply frequency so that cameras are triggered at the same point on the AC supply cycle. The LL setting allows ±180° phase adjustment via the buttons located on the rear of the camera. INT locks the frame rate to the internal oscillator of the camera. The default setting is INT.

BLC (Backlight Compensation)
The BLC (Backlight Compensation) feature compensates for backlit scenes by enhancing objects in the centre of the scene that would previously have been in silhouette. BLC will only function with a manual iris lens when the Electronic Shutter Control feature is switched on. For direct drive and auto iris lenses, BLC will still function even though the Electronic Shutter Control feature is switched off. The default setting is OFF.

D/N (Day/Night)
This switch sets the light level at which the camera automatically switches between day and night operation. Hi sets the camera to switch between day and night mode at higher light level. Lo sets the switching point at a lower light level. The default setting is Lo.

When in Night mode, the IR cut filter is removed allowing infra red illumination to the used.

Functions

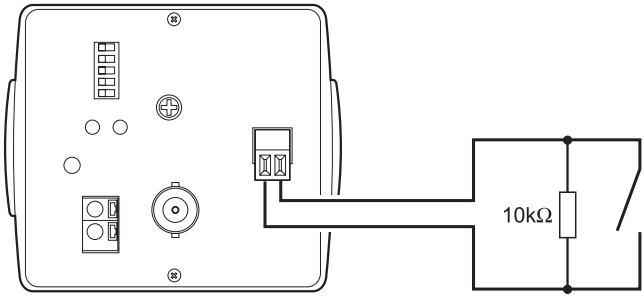
Line Lock Phase Adjust

The SYNC dip switch allows you to select between LL or INT synchronisation. The LL (line lock) setting permits the point of synchronisation on the A.C. supply cycle to be shifted. The Line-lock phase adjustment buttons allow the user to advance or retard the line lock phase trigger point by ±180° (360°of adjustment). The factory default setting is the zero crossing point. To reset the trigger point to the factory default setting, press and hold both push buttons.

Lens Level

The DC lens level potentiometer is used to adjust the brightness level of the video when using a Direct Drive or Auto Iris lens. When the potentiometer is adjusted towards H (clockwise) the video image will become brighter; when adjusted towards L (anticlockwise), the video image will become darker.

Day/ Night Trigger



DM/ICE-DN3U/.. Cameras can be switched between day and night operation manually using an external switching device. The remote switch should be connected to the connector on the rear of the camera and must be connected in parallel with a 10 kΩ resistor as shown below. The camera uses the 10 kΩ resistor to disable automatic day/night mode switching. The cable length must be no more than 1,000 feet (300 metres). The cable must not contribute more than 300 Ω to the overall resistance of the circuit.

Switch closed	Circuit resistance is < 300Ω camera switches to night/mono mode
Switch open	Circuit resistance is 10kΩ ±15% switches camera to day/colour mode
No switch or 10kΩ	Circuit resitance is > 15kΩ camera is in automatic day/night switching mode resistor fitted

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